

What is claimed is:

1. An original transport apparatus for transporting originals, comprising:

an original tray for stacking the originals,

5 feed means disposed adjacent to the original tray for feeding the originals stacked on the original tray one by one to a predetermined feeding position,

transport means disposed adjacent to the feed means for transporting one original from the feeding position to a  
10 discharge outlet through a reading position,

a switchback path disposed adjacent to the discharge outlet in a discharge direction for switching back the one original to turn over the same,

a re-feed path disposed adjacent to the switchback path for  
15 returning the one original to the feeding position after the one original is switched back in the switchback path,

discharge means disposed at a downstream side of the switchback path for discharging the one original after the one original is read, and

20 means for overlapping the one original with a next original after two sides of the one original are read so that the one original after the two sides of the one original are read is sent to the feeding position via the switchback path, is overlapped with the next original to pass through the reading position  
25 without being read, and is discharged by the discharge means via the discharge outlet.

2. An original transport apparatus according to claim 1, wherein said overlap means overlaps the one original with the next  
30 original such that a leading edge of the one original is shifted

rearwardly from a leading edge of the next original by a predetermined distance.

3. An original transport apparatus according to claim 1, wherein  
5 said discharge means includes a pair of discharge rollers capable of rotating at different speeds for discharging the one original after the two sides are read.

4. An original transport apparatus according to claim 3, wherein  
10 said pair of the discharge rollers includes a first discharge roller for contacting the one original after the two sides thereof are read, and a second discharge roller for contacting the next original to be read next, said first discharge roller rotating at a speed higher than that of the second discharge  
15 roller in discharging the original.

5. An original transport apparatus according to claim 3, wherein said pair of the discharge rollers rotates in a reverse direction for switching back the next original and for transporting the  
20 next original to the reading position after the one original, the two sides of which have been read, passes the pair of the discharge rollers.

6. An original transport apparatus according to claim 5, wherein  
25 said discharge means further includes a return prevention lever disposed adjacent to the discharge rollers for stopping the one original so that the one original is not switched back when the discharge rollers rotate in the reverse direction.

30 7. An original reading method for reading originals, comprising:

feeding one original stacked on an original tray to a predetermined feeding position,

transporting the one original from the predetermined feeding position to a predetermined reading position,

5 reading one side of the one original at the reading position, switching back the one original after the one side of the one original is read, to turn over the one original,

returning the one original to the feeding position,

reading the other side of the one original at the reading  
10 position,

switching back the one original again after two sides of the original are read to turn over the one original,

transferring the one original again to the feeding position, overlapping the one original with a next original,

15 transporting the one original and the next original to the reading position in a condition that the one original is overlapped with the next original, one side of the next original being read while the one and next originals are being transported, and

20 discharging the original.

8. An original transport method according to claim 7, wherein in overlapping the one original with the next original, the one original is overlapped with the next original such that a leading  
25 edge of the one original is shifted from a leading edge of the next original rearwardly by a predetermined distance.

9. An original transport method according to claim 7, further comprising after the one side of the next original is read,

switching back the next original to transfer the next original to the feeding position.

10. An original transport method according to claim 9, further  
5 comprising reading the other side of the next original after the one side thereof is read.

11. An image reading apparatus comprising:

transport means for receiving originals one by one, and  
10 transporting the originals sequentially to a predetermined reading position,

reading means for reading one original passing through the reading position,

a switchback path for switching back the one original read  
15 at the reading position to change a moving direction thereof to turn over the original,

discharge means for discharging the one original after the one original is read, and

control means for controlling the transport means, the  
20 reading means and the discharge means such that the one original is circulated twice through the switchback path for reading two sides of the one original by the reading means; the one original is overlapped with a next original after the two sides of the one original are read and the one and next originals are transferred  
25 to the reading position; and the next original overlapped with the one original is read by the reading means.

12. An image reading apparatus according to claim 11, wherein said control means selects a first control mode in which the one  
30 original is circulated twice through the switchback path for

reading the two sides of the one original by the reading means,  
the one original is overlapped with the next original after the  
two sides of the one original are read and the one and next  
originals are transferred to the reading position, and the next  
5 original overlapped with the one original is read by the reading  
means; or a second control mode in which the one original is  
circulated twice through the switchback path for reading the two  
sides of the one original by the reading means, and then a next  
original is transported to the reading position for reading after  
10 the one original is turned over and discharged alone.